

REMARKS

In the above-identified Office Action, the Examiner has indicated that a priority claim box is not marked on the Declaration. Applicant hereby claims priority from German Application No. 100 42 932.7 and encloses a Declaration with the box marked.

Claims 1 and 4 have been rejected under 35 U.S.C. §112 as being indefinite. Applicant has amended claim 1 to reflect the Examiner's suggestions, and as such believes these claims now to be allowable.

Claims 1, 2 and 6 have been rejected as being anticipated by the patent to Gupta. The Examiner has stated that Gupta discloses a method to avoid copper contamination during copper/metal dry etching and CMP in which a barrier metal layer/liner is deposited over the whole surface area on a patterned dielectric layer. Applicant notes that Gupta teaches that a portion of the first dielectric cap layer 16 is not polished away, remaining to prevent copper contamination of the IMD/ILD layer during the CMP process and subsequent processes. In contrast, the subject invention teaches that the auxiliary layer is under etched in order to lift off the liners lying thereon. Gupta does not teach etching the first dielectric cap layer or any other layer as now recited in the claims.

Accordingly, the function of the auxiliary layer, according to the subject invention, is completely different from what the Examiner has termed the auxiliary layer in Gupta. In other words, according to the invention the auxiliary layer facilitates according to the subject invention the auxiliary layer facilitates removal of the liner where as according to Gupta, the cap layer seals the structure and should not be easily removed by the CMP

Serial No.: 09/933,304

process.

Claim 3 has been rejected as unpatentable over Gupta et al. in view of Li et al. Applicant refers to the above remarks for it's comments on Gupta et al., and in so far as Gupta et al. does not teach or make obvious the subject invention it can not be combined with Li et al. which does not supply the defects in the structure noted above. As a result, the combination of Gupta et al. with Li et al. does not teach or suggest the subject invention.

Claim 4 has been rejected as unpatentable over Gupta et al. in view of Holland et al. Applicant refers to the above remarks for it's comments on Gupta et al., and in so far as Gupta et al. does not teach or make obvious the subject invention it can not be combined with Holland et al. which does not supply the defects in the structure noted above. As a result, the combination of Gupta et al. with Holland et al. does not teach or suggest the subject invention.

Claim 5 has been rejected as unpatentable over Gupta et al. in view of Chen et al. Applicant refers to the above remarks for it's comments on Gupta et al., and in so far as Gupta et al. does not teach or make obvious the subject invention it can not be combined with Chen et al. does not supply the defects in the structure noted above. As a result, the combination of Gupta et al. with Chen et al. does not teach or suggest the subject invention.

Claim 7 has been rejected as unpatentable over Gupta et al. in view of Schwawlke et al. Applicant refers to the above remarks for it's comments on Gupta et al., and in so far as Gupta et al. does not teach or make obvious the subject invention it can not be combined with Schwawlke et al. does not supply the defects in the structure noted above. As a result,

Serial No.: 09/933,304

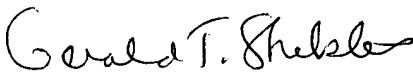
the combination of Gupta et al. with Schwawlke et al. does not teach or suggest the subject invention.

Reconsideration and reexamination are respectfully requested.

With the above amendments and remarks, this application is considered ready for allowance and Applicant earnestly solicits an early notice of same. Should the Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, he is respectfully requested to contact the undersigned at the below listed number.

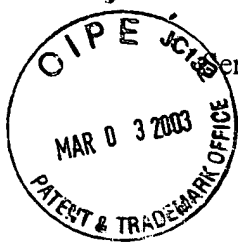
Respectfully submitted,

Welsh & Katz, Ltd.

By 
Gerald T. Shekleton
Registration No. 27,466

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WELSH & KATZ, LTD.
120 South Riverside Plaza
22nd Floor
Chicago, Illinois 60606-3913
Telephone: 312/655-1500



Serial No.: 09/933,304

MARKED UP VERSION TO SHOW CHANGES MADE

IN THE SPECIFICATION

2. (Twice Amended) The [MP process]method as claimed in claim [1]8,
wherein
the auxiliary layer has a layer thickness in the range of 20 to 100 nm.
3. (Twice Amended) The [CMP process]method as claimed in claim [1]8,
wherein
the auxiliary layer is used at least partly as a hard mask for the patterning and
preceding the etching by dry etching.
4. (Twice Amended) The [CMP process]method as claimed in claim [1] 8,
wherein
[the reaching of] the auxiliary layer is detected by an etching stop detection signal
during the CMP process.
5. (Twice Amended) The [CMP process]method as claimed in claim [1]8,
wherein
an additional wet-chemical cleaning step is carried out at the end of the etching.

Serial No.: 09/933,304

6. (Twice Amended) The [CMP process]method as claimed in claim [1]8,
wherein
the auxiliary layer is composed of diamond-like carbon, carbon polymers or of
porous material.